Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

ETHYL MALTOL

Synthetic gourmand aroma chemical with an intense caramel and sugar character

1. RAW MATERIAL IDENTIFICATION

Product name	Ethyl Maltol
INCI name	ETHYL HYDROXYPYRONE
IUPAC / REACH name	2-Ethyl-3-hydroxy-4H-pyran-4-one
Synonyms	2-Ethyl Pyromeconic Acid; 3-Hydroxy-2-ethyl-gamma-pyrone; 2-Ethyl Maltol
CAS number	4940-11-8
EC number	225-582-5
FEMA number	3487
Molecular formula	C7H8O3
Molecular weight	140.14 g/mol
Chemical group	Hydroxypyrone derivative / heterocyclic aroma chemical
Raw material origin	Synthetic; China
ISO 16128	0% natural origin

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Ethyl Maltol belongs to the Gourmand olfactory family, with additional Fruity - Non Citrus and Lactonic - Creamy characteristics. In a fragrance structure, it acts as a middle and base note with an exceptionally strong and long-lasting sweetening effect.

Its odour is highly intense, sweet and persistent, dominated by caramel, caramelised sugar and candyfloss facets, with nuances of warm fruit, strawberry and jammy red berries.

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3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITIONS

Ethyl Maltol is a particularly powerful gourmand aroma chemical characterised by the odour of caramelised sugar, candyfloss and confectionery. Its olfactory strength is considerably greater than that of maltol, and even very small quantities impart a recognisable confectionery sweetness.

Its odour profile includes warm caramel, sugar syrup and jammy nuances of strawberry and red berries. At carefully controlled levels, it increases the fullness, sweetness and appeal of a composition. Excessive concentrations may suppress other notes and create a heavy, burnt or distinctly syrupy effect.

Functional role in perfumery: A powerful gourmand sweetener, enhancer of caramel and fruit notes, and modifier of vanilla, milky and amber bases. It provides confectionery fullness, warmth and a long-lasting sweet character.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended use in fragrances: For building caramel, sugary, fruity-gourmand and dessert accords, and for enhancing sweetness in vanilla, milky and amber compositions.

It is used to create and modify:

- caramel, candyfloss and caramelised sugar accords;
- gourmand and confectionery compositions;
- candy, lollipop and fruit-sweet accords;
- strawberry, raspberry, cherry and other red-fruit notes;
- jammy and syrupy fruit accords;
- vanilla, creamy and milky compositions;
- chocolate, praline and dessert accords;
- sweet amber, oriental and tobacco fragrances;
- fragrances for cosmetics, soaps and hygiene products.

It blends well with vanillin, ethyl vanillin, maltol, coumarin, heliotropin, benzoin, tonka, creamy lactones, furaneol, fruity esters, damascones, amber materials and soft musky aroma chemicals.

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5. RECOMMENDED USE

Recommended use level	0.01-0.20% pure Ethyl Maltol in the fragrance concentrate
Lower concentrations	Below 0.01% for a subtle increase in sweetness
Note	Formulation guidance, not a regulatory maximum concentration

Because of its very high odour intensity, preparation of a 1% or 10% solution in ethanol, benzyl alcohol or another validated perfumery solvent is recommended. Gentle warming with stirring may be necessary. Solution stability and possible recrystallisation must be checked after cooling.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Crystalline powder
Colour	White
Odour	Caramel, caramelised sugar and candyfloss, with warm-fruit and strawberry nuances
Melting point	89-93 °C
Boiling point	Approximately 290 °C
Flash point	100 °C, closed-cup method
Purity	99.0-100.0%
Solubility in water	Approximately 1 g in 55 ml water
Solubility in ethanol	Approximately 12%
Solubility in benzyl alcohol	Approximately 10%
Solubility in propylene glycol	Approximately 5.5%
Solubility in phenylethyl alcohol	Approximately 5%
Shelf life	24 months

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7. STABILITY AND COMPATIBILITY

Stable under the recommended storage conditions. Incompatible with strong oxidising agents, strong bases and acids. Compatibility, stability, colour, solubility and odour profile must be confirmed in the final formulation and intended packaging.

8. REGULATORY DATA AND STATUS

Declarable fragrance allergens: Does not contain declarable fragrance allergens according to the supplied cosmetic declaration.

Vegan status: Vegan; contains no animal-derived ingredients. GMO status: Does not contain and is not derived from GMOs.

Nanomaterials: Does not contain nanomaterials. Antioxidants and stabilisers: None added.

Residual solvent: Ethanol, approximately 0.005%. Halal and Kosher status: Compliant with the applicable requirements.

Palm oil and derivatives: Does not contain palm oil, palm-kernel oil or their derivatives.

9. STORAGE AND SHELF LIFE

Store at temperatures up to 25 °C in the original, well-filled and hermetically sealed packaging, protected from air, light, moisture and heat sources. Close the container immediately after use.

Shelf life: 24 months when stored in the original packaging under the recommended conditions.

10. SAFETY INFORMATION

Ethyl Maltol is intended for professional use as an ingredient in fragrance, cosmetic and flavour compositions. It must not be applied directly to the skin and is not intended for oral use as an undiluted raw material.

H302: Harmful if swallowed. Avoid generating and inhaling dust. Wear protective gloves and eye protection, and wash hands thoroughly after handling. Do not eat, drink or smoke while working with the material.

The final concentration must comply with the safety assessment, intended use of the finished product and regulations of the target market. Consult the current SDS and applicable regulatory documentation before use.

11. DISCLAIMER

The information applies exclusively to the raw material described and does not replace the specification, COA, IFRA documentation or SDS issued by the specific manufacturer. The user is responsible for verifying suitability, stability, safety and regulatory compliance for the intended application and target market. This document does not constitute regulatory approval or a guarantee of the properties of the finished product.